

ABSTRACT

To synchronize clock signals in spatially distributed nodes in a large, synchronous electronic, optical, optoelectronic or wireless system, a master node generates two identical pulse trains and propagates them to a plurality of slave nodes via first and second propagation channels, respectively, so that a pair of pulses, one from each pulse train, arrive at each slave node simultaneously, travelling in opposite directions. Each slave node generates a clock signal event when the pair of pulses arrive substantially simultaneous. When the pulses in the two channels do not arrive simultaneously, the slave node adjusts delays in each propagation channel so as to adjust arrival times of subsequent pairs of pulses. The delays may comprise pre-delays upstream of the detection point and post-delays downstream of the detection point, any increment in a pre-delay being compensated by an equal decrement in the post-delay in the same propagation channel.

RECORDED BY COMPUTER